

- 2 -

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of the claims in the application:

**Listing of Claims:**

1. (withdrawn) A method for trimming a functional resistor, the method comprising:  
    placing a plurality of thermally-trimmable functional resistors on on a substrate such that they are thermally-isolated;  
    subjecting a portion of the substrate to a heat pulse such that a resistance value of one of said plurality of functional resistors is trimmed while a resistance value of remaining ones of said plurality of functional resistors remains substantially untrimmed.
2. (withdrawn) A method as claimed in claim 56, further comprising placing a heating resistor on the thermally-isolated micro-platform in close proximity to at least one of the plurality of functional resistors, wherein said subjecting a portion of the thermally-isolated micro-platform further comprises passing a signal through the heating resistor to increase its temperature significantly for the purpose of trimming said at least one of said plurality of functional resistors without substantially affecting remaining ones of the plurality of functional resistors on the thermally-isolated micro-platform
3. (withdrawn) A method as claimed in claim 2, wherein placing a heating resistor on the thermally-isolated micro-platform further comprises placing said heating resistor such that it is electrically isolated from said at least one of the plurality of functional resistors.
4. (withdrawn) A method as claimed in claim 56, wherein said subjecting comprises providing a plurality of electrical pulses and measuring said resistance value of one

- 3 -

of said plurality of functional resistors in between each of said plurality of electrical pulses to determine whether a target resistance value has been obtained.

5. (withdrawn) A method as claimed in claim 56, wherein said heating comprises providing dynamically-shaped electrical pulses to achieve substantially constant temperature as a function of time during a trimming pulse.
6. (withdrawn) A method as claimed in claim 2, wherein said placing a heating resistor on the thermally-isolated micro-platform further comprises placing said heating resistor such that it traces said at least one of said plurality of functional resistors.
7. (withdrawn) A method as claimed in claim 6, wherein said heating resistor is placed along an outside portion of said functional resistor to obtain a substantially constant temperature distribution across said functional resistor.
8. (withdrawn) A method as claimed in claim 56, further comprising raising said thermally-isolated micro-platform's temperature to trim downwards values of all trimmable functional resistors on said thermally-isolated micro-platform, measuring said trimmable functional resistors, and individually trimming upwards each of said trimmable functional resistors.
9. (withdrawn) A method for providing and trimming a circuit, the method comprising:
  - placing at least two resistive elements with non-zero temperature induced drift on a substrate to be thermally isolated, such that said at least two resistive elements are subjected to a substantially same operating environment, at least one of said at least two resistive elements being thermally trimmable;
  - trimming said at least one resistive element to trim said circuit by thermal cycling;
  - connecting said at least two resistive elements together in said circuit in a manner to compensate for said operating environment;

- 4 -

wherein heat generated during operation is distributed among said at least two resistive elements such that temperature drift is substantially compensated.

10. (withdrawn) A method as claimed in claim 57, wherein said connecting said at least two resistive elements together comprises connecting said two resistive elements in series, wherein an applied voltage is divided with a predetermined ratio.
11. (withdrawn) A method as claimed in claim 57, wherein said placing at least two resistive elements of said circuit on said at least one thermally-isolated micro-platform comprises said at least two resistive elements to be temperature sensitive elements located closely on said at least one thermally-isolated micro-platform, and whose signals are combined to measure a temperature differential induced during operation.
12. (withdrawn) A method as claimed in claim 11, wherein said signals are combined to measure a temperature differential induced by a gas movement.
13. (withdrawn) A method as claimed in claim 57, further comprising placing a heating resistor on the at least one thermally-isolated micro-platform in close proximity to said at least one resistive element, wherein said trimming said at least one resistive element further comprises passing a signal through the heating resistor to increase its temperature significantly for the purpose of trimming said at least one resistive element.
14. (withdrawn) A method as claimed in claim 13, wherein said heating resistor and said at least one resistive element are on separate thermally-isolated micro-platforms.
15. (withdrawn) A method as claimed in claim 57, wherein said trimming comprises providing a plurality of electrical pulses and measuring said resistance value of one

- 5 -

of said at least two resistive elements in between each of said plurality of electrical pulses to determine whether a target resistance value has been obtained.

16.(withdrawn) A method as claimed in claim 57, wherein said heating comprises providing dynamically-shaped electrical pulses to achieve substantially constant temperature as a function of time during a trimming pulse.

17.(currently amended) A method for trimming a ~~functional~~ thermally-trimmable resistor, the method comprising:

placing a ~~thermally-trimmablefunctional~~ resistor on a substrate such that they are thermally-isolated;

subjecting said ~~thermally-trimmablefunctional~~ resistor to a heat source having a power dissipation geometry adapted to obtain a substantially constant temperature distribution across said ~~thermally-trimmablefunctional~~ resistor by dissipating more power at the boundaries of a heat-targeted region where there is greater heat loss, when a temperature of said ~~thermally-trimmablefunctional~~ resistor is raised for trimming purposes; and

trimming said ~~thermally-trimmablefunctional~~ resistor using at least one heat pulse.

18.(currently amended) A method as claimed in claim 58, wherein said trimming comprises passing a signal through said ~~thermally-trimmablefunctional~~ resistor, said ~~thermally-trimmablefunctional~~ resistor providing said heat source.

19.(currently amended) A method as claimed in claim 58, wherein said subjecting comprises placing a heating resistor on said thermally-isolated micro-platform in close proximity to said ~~thermally-trimmablefunctional~~ resistor, and wherein said trimming comprises passing a signal through said heating resistor to trim said ~~thermally-trimmablefunctional~~ resistor.

- 6 -

- 20.(currently amended) A method as claimed in claim 19, wherein said subjecting further comprises designing a heater path to encircle said thermally-trimmable functional-resistor.
- 21.(currently amended) A method as claimed in claim 58, wherein said subjecting comprises supplying more heat around edges of a region in which most of said thermally-trimmable functional-resistor resides, in order to counteract a faster heat dissipation in said edges and resulting temperature gradients across the thermally-isolated micro-platform.
- 22.(currently amended) A method as claimed in claim 19, wherein said subjecting further comprises designing a heater path to substantially enclose said thermally-trimmable functional-resistor with said heating resistor.
- 23.(previously presented) A method as claimed in claim 58, wherein said subjecting comprises increasing a density of resistive lines near locations where there is greater heat loss to compensate for the heat loss.
- 24.(currently amended) A method as claimed in claim 58, wherein said trimming comprises providing a plurality of electrical pulses and measuring said resistance value of one of said plurality of thermally-trimmable resistors in between each of said plurality of electrical pulses to determine whether a target resistance value has been obtained.
- 25.(previously presented) A method as claimed in claim 58, wherein said trimming comprises providing dynamically-shaped electrical pulses to achieve substantially constant temperature as a function of time during a trimming pulse.
- 26.-49 (cancelled)

- 7 -

50. (withdrawn) A method for calculating a temperature coefficient of resistance of a functional resistor, the method comprising:

placing a functional resistor on a substrate such that they are thermally-isolated;

injecting a heat pulse to raise a temperature of said functional resistor to a predetermined temperature;

measuring a resistance value of said functional resistor at a plurality of temperatures; and

calculating said temperature coefficient of resistance based on said measured resistance values.

51. (withdrawn) A method as claimed in claim 59, further comprising placing a heating resistor on said at least one thermally-isolated micro-platform and wherein said injecting a heat pulse comprises passing a signal through said heating resistor.

52. (withdrawn) A method as claimed in claim 59, further comprising measuring a resistance value at a plurality of elevated temperatures in order to determine how said temperature coefficient of resistance varies as a function of temperature.

53. (withdrawn) A method as claimed in claim 59, wherein said micro-platform comprises a plurality of said functional resistors, said injecting a heat pulse comprising heating of said micro-platform to heat all of said functional resistors at a same time, said measurement and said calculating being performed substantially simultaneously for all of said functional resistors.

54. – 55. (cancelled)

56. (withdrawn) A method as claimed in claim 1, further comprising providing a thermally-isolated micro-platform on said substrate, and said placing a plurality of

- 8 -

thermally-trimmable functional resistors on a substrate comprises placing said plurality of thermally-trimmable functional resistors on said thermally-isolated micro-platform.

57. (withdrawn) A circuit as claimed in claim 9, further comprising providing at least one thermally-isolated micro-platform on said substrate, and wherein said at least two resistive elements are on said at least one thermally-isolated micro-platform.

58. (currently amended) A method as claimed in claim 17, further comprising providing a thermally-isolated micro-platform on said substrate, and said placing a thermally-trimmable functional resistor on a substrate comprises placing said thermally-trimmable functional resistor on said thermally-isolated micro-platform.

59. (withdrawn) A circuit as claimed in claim 50, further comprising providing at least one thermally-isolated micro-platform on said substrate, and wherein said functional resistor is on said at least one thermally-isolated micro-platform.